

## A B S T R A C T

A technique for handling an optical pulse signal, wherein the handling includes one or more operations out of: pulse shaping, treatment of nonlinearity and monitoring; the technique uses a device capable of performing a cascaded second harmonic generation (SHG) with respect to a particular fundamental harmonic (FH), and comprises:

selecting in the device a particular optical path length suitable for performing at least one of the above operations with respect to an incoming optical pulse signal carried by a wavelength defined by the particular fundamental harmonic (FH),

10

conveying the incoming optical pulse signal carried by the defined wavelength along the selected optical path in the device,

obtaining from the device an output optical pulse signal at the fundamental harmonic (FH), wherein the treatment of nonlinearity and/or the pulse shaping are performed, and/or obtaining an output optical pulse signal at the second harmonic (SH) for further monitoring it and judging about the input optical pulse signal.